

WHAT IS CLAIMED IS:

1 1. In a data communication system including a wireless subsystem for the transmission
2 of data packets between a server and a wireless handset having a voice/data capability
3 selectable between first and second operating modes, a method of selecting the operating
4 mode of the handset after wireless communication is established between the handset and the
5 subsystem, which comprises the steps of:

6
7 associating, with the system, a data base containing data indicative of the operating
8 mode capability of the subsystem;

9
10 transmitting query messages on the system from the handset to the data base to retrieve
11 such capability data; and

12
13 operating the handset in the second mode if the retrieved capability data indicates that
14 the subsystem is capable of operation in the second mode.

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16 2. In a data communication system for transmitting data packets between a server and
17 a wireless handset having a voice/data capability selectable between first and second operating
18 modes, the system comprising, in combination, first and second wireless subsystems coupled
19 to the server, the first subsystem being operable in the first mode, the handset being initially
20 in wireless communication with the first subsystem in the first mode, a method of selecting
21 the operating mode of the handset in connection with a handoff of the handset from the first
22 subsystem to the second subsystem, which comprises the steps of:

23
24 associating, with the system, a data base containing data indicative of the operating
25 mode capability of the second subsystem;

26
27 transmitting query messages on the system from the handset to the data base after
28 execution of the handoff to retrieve such capability data; and

switching the handset into the second mode if the retrieved capability data indicates that the second subsystem is capable of operation in the second mode.

3. A method as defined in claim 2, in which the query messages contain information identifying the subsystem to which the handset is then connected.

4. A method as defined in claim 3, in which the query messages further contain information identifying the current specific latitude-longitude location of the handset.

✓ 5. In a data communication system for transmitting data packets between a server and a wireless handset having a voice/data capability selectable between first and second operating modes, the system comprising, in combination, first and second base stations coupled to the server, the first base station being operable in the first mode, the handset being initially in wireless communication with the first base station in the first mode, a method of selecting the operating mode of the handset in connection with a handoff of the handset from the first base station to the second base station, which comprises the steps of:

associating, with the system, a data base containing data indicative of the operating mode capability of the second base station;

transmitting query messages on the system from the handset to the data base after execution of the handoff to retrieve such capability data; and

switching the handset into the second mode if the retrieved capability data indicates that the second base station is capable of operation in the second mode.

✓ 6. In a data communication system for transmitting data packets between a wireless handset having a voice/data capability selectable between first and second operating modes and a server designated as a first Internet destination port for the handset, the system comprising, in combination, first and second wireless subsystems coupled to the server

5 through the Internet, the first subsystem being operable in the first mode, the handset being
6 initially in wireless communication with the first subsystem in the first mode, a method of
7 selecting the operating mode of the handset in connection with a handoff of the handset from
8 the first subsystem to the second subsystem, which comprises the steps of:
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10 associating, with the system, a data base containing data indicative of the operating
11 mode capability of the second subsystem;

12 transmitting query messages on the system from the handset to the data base after
13 execution of the handoff to retrieve such capability data; and

14 switching the handset into the second mode if the retrieved capability data indicates
15 that the second subsystem is capable of operation in the second mode.

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17 7. A method as defined in claim 6, in which the associating step comprises
18 designating the data base as a second Internet destination port for the handset.

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20 8. A method as defined in claim 6, in which the data base further contains
21 configuration data useful for efficient radio communication between the handset and the
22 second subsystem in the second mode.

23
24 9. In a data communication system for transmitting data packets between a server and
25 wireless handset having a voice/data capability selectable between first and second operating
26 modes, the system comprising, in combination, a first wireless subsystem including a first
27 base station coupled to the server through the Internet and operable in the first mode, and a
28 second wireless subsystem including second and third base stations coupled to the server
29 through the Internet, the second base station being operable in the first mode, the handset
being initially in wireless communication with the first base station in the first mode, a
method of selecting the operating mode of the handset in connection with a handoff of the
handset from the first base station to the second base station, which comprises the steps of:

10 associating, with the system, a data base containing data indicative of the operating
11 mode capability of the third base station;

12
13 transmitting query messages on the system from the handset to the data base over the
14 second base station after the handoff to retrieve such capability data;

15
16 switching the handset into the second mode if the retrieved capability data indicates
17 that the third base station is capable of operation in the second mode; and

18
19 establishing wireless communication between the handset and the third base station
20 when the operating mode of the handset is switched.

10. In a data communication system for transmitting data packets between a wireless
11 handset having a voice/data capability selectable between first and second operating modes
12 and a server designated as a first Internet destination port for the handset, the system
13 comprising, in combination, a first wireless subsystem including a first base station coupled
14 to the server through the Internet and operable in the first mode, and a second wireless
15 subsystem including second and third base stations coupled to the server through the Internet,
16 the second base station being operable in the first mode, the handset being initially in wireless
17 communication with the first base station in the first mode, a method of selecting the
18 operating mode of the handset in connection with a handoff of the handset from the first base
19 station to the second base station, which comprises the steps of:

20
21 associating, with the system, a data base containing data indicative of the operating
22 mode capability of the third base station;

23
24 transmitting query messages on the system from the handset to the data base over the
25 second base station after the handoff to retrieve such capability data;

18 switching the handset into the second mode if the retrieved capability data indicates
19 that the third base station is capable of operation in the second mode; and
20

21 establishing wireless communication between the handset and the third base station
22 when the operating mode of the handset is switched.

1 11. A method as defined in claim 10, in which the associating step comprises
2 designating the data base as a second Internet destination port for the handset.

1 12. In a wireless handset operable in a selectable one of first and second voice/data
2 modes for exchanging data packets with a remote machine through a data communication
3 system, the system comprising, in combination, a first wireless subsystem coupled to the
4 remote machine and operable in the first mode, a second wireless subsystem coupled to the
5 remote machine, and a data base associated with the system and containing data indicative of
6 the operating mode capability of the second subsystem, the handset being initially in radio
7 communication with the first subsystem in the first mode, the handset being switchable into
8 radio communication with the second subsystem in response to the execution of a handoff of
9 the handset from the first subsystem to the second subsystem:

10
11 means responsive to the execution of the handoff for generating a capability data
12 request to be transmitted to the data base through the first subsystem to retrieve the
13 capability data; and

14
15 means responsive to the retrieved capability data for switching the handset from the
16 first mode to the second mode if the retrieved capability data indicates that the second
17 subsystem is capable of operation in the second mode.

1 13. In a data communication system for transmitting data packets between a server and
2 a wireless handset operable in a selectable one of first and second voice/data modes, the
3 system comprising, in combination, a first wireless subsystem coupled to the server and

4 operable in the first mode, and a second wireless subsystem coupled to the server, the handset
5 being initially in radio communication with the first subsystem in the first mode, the handset
6 being switchable into radio communication with the second subsystem in response to the
7 execution of a handoff of the handset from the first subsystem to the second subsystem:
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9 a data base associated with the system and containing data indicative of the operating
10 mode capability of the second subsystem;

11 means associated with the handset and operative in the event of a handoff of the
12 handset from the first subsystem to the second subsystem for interrogating the data
13 base over the system to retrieve the capability data; and
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15 means associated with the handset and responsive to the retrieved capability data for
16 operating the handset in the second mode after such handoff if the retrieved capability
17 data indicates that the second subsystem is capable of operation in the second mode.
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19 14. In a data communication system for the transmission of data packets between a
20 server and a wireless handset having a voice/data capability selectable between first and
21 second modes, the system comprising a base station coupled to the server and in radio
22 communication with the wireless handset:

23 a data base associated with the system and containing data indicative of the operating
24 mode capability of the base station;

25 means associated with the handset for transmitting query messages on the system from
26 the handset to the data base to retrieve such capability data; and
27

28 means responsive to the retrieved capability data for operating the handset in the
29 second mode if the retrieved capability data indicates that the base station is capable of
30 operation in the second mode.
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1 15. In a data communication system for transmitting data packets between a server and
2 a wireless handset operable in a selectable one of first and second voice/data modes, the
3 system comprising first and second base stations coupled to the server, the first base station
4 being operable in the first mode, the handset being in initial wireless communication with the
5 first base station and switchable into wireless communication with the second base station
6 when handed off to the second base station:

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8 a data base associated with the system and containing data indicative of the operating
9 mode capability of the second base station;

10
11 means associated with the handset and operative in the event of a handoff of the
12 handset from the first base station to the second base station for interrogating the data
13 base over the system to retrieve the capability data; and

14
15 means associated with the handset and responsive to the retrieved capability data for
16 operating the handset in the second mode after such handoff if the retrieved capability
17 data indicates that the second base station is capable of operation in the second mode.

1 16. In a data communication system for transmitting data packets between a first
2 server and a wireless handset operable in a selectable one of first and second voice/data
3 modes, the system comprising first and second wireless subsystems coupled to the first server,
4 the first subsystem being operable in the first mode, the handset being in initial wireless
5 communication with the first subsystem and switchable into wireless communication with the
6 second subsystem when handed off to the second subsystem:

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8 a second server associated with the system;

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10 a data base incorporated in the second server and containing data indicative of the
11 operating mode capability of the second subsystem;

12 means associated with the handset and operative in the event of a handoff of the
13 handset from the first subsystem to the second subsystem for interrogating the data
14 base over the system to retrieve the capability data; and

15
16 means associated with the handset and responsive to the retrieved capability data for
17 operating the handset in the second mode after such handoff if the retrieved capability
18 data indicates that the second subsystem is capable of operation in the second mode.

1 17. A system as defined in claim 16, in which the first and second servers are
2 designated as first and second Internet destination ports, respectively, for the handset.

1 18. A system as defined in claim 16, in which the data base further contains
2 configuration data useful for efficient radio communication between the handset and the
3 second subsystem in the second mode.

1 19. In a data communication system for transmitting data packets between a wireless
2 handset having a voice/data capability selectable between first and second operating modes
3 and a server designated as a first Internet destination port for the handset, the system
4 comprising, in combination, a first wireless subsystem including a first base station coupled
5 to the server through the Internet and operable in the first mode, and a second wireless
6 subsystem including second and third base stations coupled to the server through the Internet,
7 the second base station being operable in the first mode, the handset being initially in wireless
8 communication with the first base station in the first mode and switchable into wireless
9 communication with the second base station when handed off from the first base station to the
10 second base station:

11
12 a data base associated with the system and containing data indicative of the operating
13 mode capability of the third base station;

15 means associated with the handset and operative after execution of a handoff of the
16 handset from the first base station to the second base station for interrogating the data
17 base over the second base station to retrieve the capability data;

18
19 means associated with the handset and responsive to the retrieved capability data for
20 operating the handset in the second mode if the retrieved capability data indicates that
21 the third base station is capable of operation in the second mode; and

22
23 means coupled to the operating means and effective when the handset is operated in
24 the second mode for establishing wireless communication between the handset and the
25 third base station.

15 20. A system as defined in claim 19, in which the data base is designated as a second
26 Internet destination port for the handset.

16 21. In a data communication system for transmitting data packets between a wireless
27 handset having a voice/data capability selectable between first and second operating modes
3 and a first server designated as a first Internet destination port for the handset, the system
4 comprising, in combination, a first wireless subsystem including a first base station coupled
5 to the first server through the Internet and operable in the first mode, and a second wireless
6 subsystem including second and third base stations coupled to the first server through the
7 Internet, the second base station being operable in the first mode, the handset being initially in
8 wireless communication with the first base station in the first mode and switchable into
9 wireless communication with the second base station when handed off from the first base
10 station to the second base station:

11
12 a second server associated with the system;

13
14 a data base incorporated in the second server and containing data indicative of the
15 operating mode capability of the third base station;

16 means associated with the handset and operative after execution of a handoff of the
17 handset from the first base station to the second base station for interrogating the data
18 base over the second base station to retrieve the capability data;
19
20 means associated with the handset and responsive to the retrieved capability data for
21 operating the handset in the second mode if the retrieved capability data indicates that
22 the third base station is capable of operation in the second mode; and
23
24 means coupled to the operating means and effective when the handset is operated in
25 the second mode for establishing wireless communication between the handset and the
26 third base station.

16 22. A system as defined in claim 21, in which the second server is designated as a
27 second Internet destination port for the handset.
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